

Comment Letter AF007

AF007



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

August 31, 2004

REPLY TO
ATTENTION OF:

Office of the Chief
Regulatory Branch

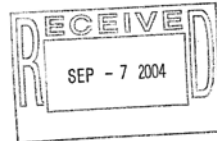
Mr. Mark E. Yachmetz
Associate Administrator for Railroad Development
U.S. Department of Transportation
Federal Railroad Administration
1120 Vermont Avenue, N.W.
Washington, D.C. 20590

Dear Mr. Yachmetz:

Pursuant to our regulatory authorities promulgated under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbor Act (RHA), we offer the following comments on the **California High Speed Train Project** ("Project") Draft Program Environmental Impact Report/Tier 1 Environmental Impact Statement ("PEIR/EIS"). The Federal Railroad Administration ("FRA") is the lead federal agency pursuant to the National Environmental Policy Act (NEPA), whereas the California High Speed Rail Authority ("HSRA") is the lead state agency in accordance with the requirements set forth in the California Environmental Quality Act (CEQA).

In 2003, the U.S. Army Corps of Engineers ("Corps") entered into a Memorandum of Understanding ("MOU") for the Project along with the FRA, Federal Highway Administration, Federal Transit Administration, and the U.S. Environmental Protection Agency to formalize our cooperating agency status as defined in regulation at 40 C.F.R. § 1501.6. This MOU stipulates our primary responsibilities associated with the Tier 1 EIS, which in general, are to provide guidance on CWA and RHA regulatory matters, disclose substantive issues relating to the direct, indirect and/or cumulative effects on the aquatic environment, and identify data gaps or other informational needs. Towards this end, the Project cooperating agencies have embraced the spirit and intent of the NEPA/Section 404 of the Clean Water Act (CWA) integration procedures established for the state of California. These integration steps strive for federal agency concurrence at key milestones in the environmental review process to avoid regulatory and procedural issues from resurfacing at a later time.

On June 6, 2001, former South Pacific Division Commander, General Peter T. Madsen, designated the Los Angeles District as the lead district office to participate in the interagency working group associated with this proposed Project. As you may know, the proposed Project would affect the jurisdictions of three Corps District Regulatory Branch permitting offices within our South Pacific Division, namely San Francisco, Sacramento and Los Angeles. Consequently,



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our comments are broad in nature and are intended to represent the common interests of all three offices. In the comments that follow (see Enclosure), we have addressed our regulatory scope, range of alternatives, evaluation of impacts, mitigation/sequencing, and general data needs for future environmental documentation. However, regionally specific regulatory issues are likely to be further addressed or expanded upon by one or more of our District offices during the project-level scoping and detailed environmental analysis, as appropriate.

The goal of the PEIR/EIS is to select a 'system' alternative, that is, Modal or High Speed Train, which would satisfy the Project's overall purpose and, if possible, identify options for a High Speed Train preferred corridor/alignment with associated station locations. During the development of the public Draft PEIR/EIS the Corps has worked cooperatively with the FRA, HSRA and the other agencies to provide feedback at key milestones to ensure the decisions made around Section 404 of the CWA 'pre-application' regulatory processes are well substantiated and documented. The intent of our involvement is to ensure that a robust range of reasonable and practicable alternatives are advanced to the next stage of analysis, which are most likely to exhibit the characteristics of the least environmentally damaging practicable alternative ("LEDPA").

The Corps recognizes the importance of this project and in working collaboratively with the FRA to ensure the environmental processes and substantive requirements are both ripe for consideration and sufficiently fulfilled. If you have any questions relating to our attached comments, please feel free to contact Ms. Susan A. DeSaddi at (213) 452-3412 of my staff. Please refer to this letter and 200100857-SAD in your reply.

Sincerely,

Aaron O. Allen, Ph.D.
Acting Chief, Regulatory Branch

Enclosure

1. Detailed Comments

Copies Furnished:

California High Speed Rail Authority (Mehdi Morshed, Dan Leavit)
U.S. Environmental Protection Agency (Enrique Manzanilla, Connell Dunning)
U.S. Fish and Wildlife Service (Mark Littlefield)

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ENCLOSURE: U.S. Army Corps of Engineers Detailed Comments

Regulatory Scope

At its conclusion, this Tier 1 process will recommend one or more alternatives be advanced for detailed analysis, but it will not result in the issuance of regulatory permits or the acquisition of right-of-way. Rather, as the Corps understands, subsequent to this programmatic environmental process a Tier 2, or project-level, NEPA/CEQA document will be prepared to evaluate the corridor/alignment options and station locations that have been advanced from the Tier 1 EIS Record of Decision (ROD). During future NEPA analysis, opportunities would be pursued for further avoidance and minimization of aquatic resources. Moreover, the Tier 2 environmental review process would comply with the substantive requirements of the 404(b)(1) Guidelines ("Guidelines") as well as achieve consistency with the Corps public interest review process for Department of Army ("DA") Standard Individual Permits.

The Guidelines indicate that discharges of dredged or fill material into waters of the U.S., including wetlands, should not occur unless it can be demonstrated that such discharges, either individually or cumulatively, will not result in unacceptable adverse effects on the aquatic ecosystem. The Guidelines specifically require that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge, which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. When considering practicability, the Guidelines define a practicable alternative as one that *is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purposes* [refer to 40 C.F.R. § 230.3(q)].

A discharge of dredged or fill material into waters of the U.S. can only be permitted if it is the LEDPA; does not violate any applicable State water quality standards or toxic effluent standard or prohibition; does not jeopardize the continued existence of species listed as endangered or threatened under the Endangered Species Act or adversely modify their designated critical habitat; does not significantly degrade the nation's waters; has taken all steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem; and is not contrary to the public interest. As the future applicant, the HSRA will bear the burden of proof for all the tests of the Guidelines to demonstrate to the Corps that the proposed Project, or any part of it, should be built in waters of the U.S.

Based on the aforementioned, full compliance with the Guidelines and the Corps' public interest review process will not be entirely determined nor fulfilled until such time that: a Tier 2/project-level NEPA document is prepared; a preferred alternative is identified; a DA Section 404 permit application is processed; a Public Notice ("PN") is issued to solicit and consider public comments; and a thorough 404(b)(1) alternatives analysis is conducted.

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Range of Alternatives

Notwithstanding the requirements outlined above, decisions will be made at this programmatic Tier 1 level relating to the environmental impacts (benefits and detriments) and 'preliminary' practicability constraints associated with the Project's proposed alternatives. As a matter of policy, the range of alternatives and rigor of analysis should be proportional to the level of impacts. Paramount to the Corps' decision-making processes is that proposed high-speed corridors/alignments which exhibit the potential for the least overall adverse environmental harm or for which the environmental impacts are not fully known are appropriately examined in the context of "practicability"¹ prior to being eliminated from further consideration. In other words, we need to ensure a robust range of reasonable and practicable alternatives are advanced which are most likely to exhibit the characteristics of the LEDPA.

Based on the evaluation presented in the Draft PEIR/EIS, the proposed Project would potentially result in substantial adverse effects on aquatic resources. In many cases, the potential impacts to water resources would exceed 1,000 acres (as reported in Appendix 3). More specifically, in the Bay Area to Merced segment several alignments proposed to cross this environmentally sensitive area would potentially result in impacts to wetlands ranging from 59 acres to 9,627 acres². These alternatives include the Pacheco Pass/SR-152 alignment and Diablo Direct alignments; the Altamont Pass alignment, which is located farther north was rejected by the HSRA during the screening process due to undesirable operational deficiencies and therefore wetlands impacts associated with this alignment are not included in the Draft PEIR/EIS summary Table 3.15-D.

General biological data coupled with statutory designations of "aquatic resources of national importance" (e.g., Orestimba Creek) occurring within the southern portion of the mountain range make this area critically important to sustaining healthy ecological functions, particularly those associated with aquatic resources and wildlife movement. This section of the mountain range would be affected by the Diablo and Pacheco alignments. It appears the Diablo Range Direct alignments would potentially adversely impact existing mitigation/conservation sites, marine/anadromous fish resources, listed endangered and threatened species, the Henry Coe State Park, and the Orestimba Wilderness area. Although tunneling is proposed to minimize some of these impacts, cumulatively, the adverse effects may render these alternatives inconsistent with the Guidelines. For similar reasons, there is concern that the Pacheco Pass/SR-152 alignment options may result in the significant degradation of aquatic resources.

Because it is unclear whether the difference between the environmental impacts of the

¹ "Practicability" as defined by 40 C.F.R. § 230.3(q)

² For biologically sensitive areas, impacts were calculated assuming a worse case scenario within a 2,000-foot-wide study "envelope". In actuality, the footprint of direct disturbance to biological resources would be substantially less, based on a 50- to 100-foot-wide construction footprint.

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proposed Diablo Direct alignments and Pacheco Pass alignment would be minor when compared to the Altamont Pass alignment, we believe decisions relating to the elimination of alternatives in this regional segment are not ripe. Instead, the Corps requests decisions regarding the Bay Area to Merced segment be deferred until new or supplemental information and analytical analyses could more thoroughly and accurately substantiate the degree and magnitude of impacts associated with each alternative. In doing so, a reasonable range of practicable alternatives would be preserved for the future NEPA analysis, which in turn would better inform the public and decision makers of the direct, indirect, and cumulative losses to the aquatic ecosystem.

Identification of Resources & Evaluation of Impacts to the Aquatic Environment

The Council on Environmental Quality (CEQ) requires the data and analyses in an EIS are commensurate with the importance of the impact (40 C.F.R. § 1502.15). Similarly, the Guidelines emphasize the level of documentation should reflect the significance and complexity of the discharge activity (40 C.F.R. § 230.6). In the context of this Project, the evaluation of impacts presented in Section 3.15 of the Draft PEIR/EIS suggests the proposed alternatives would potentially result in significant adverse impacts to waters of the U.S. For instance, figures presented in Appendix 3.15-D estimate a potential loss of up to 9,627 acres of wetlands within the designated 2,000-foot-wide study area for the San Francisco to San Jose segment. While we recognize this and other acreages presented in Table 3.15-D-1 are likely to be over reported since the evaluation assumed a worse case scenario, the projected magnitude of impacts to aquatic resources justifies the need for a rigorous study and candid disclosure of impacts. To this end, relevant quantitative information should be coalesced in the main report of the Final PEIR/EIS rather than relegated to appendices. Additionally, supplemental data should augment the evaluation, particularly in areas of known sensitivity for which little site-specific data has been collected.

The programmatic environmental evaluation provides a planning-level assessment of the existing environmental resources within a relatively large study area and with a correspondingly broad analysis of potential effects. These landscape-level assessments largely rely upon existing data for inventorying resources. In fact, the primary data source used for identifying wetlands is the National Wetlands Inventory (NWI) maps. Section 3.15 of the Draft PEIR/EIS acknowledges that these maps do not show all wetlands and indicates the level of information is therefore incomplete in some areas. Due to the various shortcomings of NWI maps, the Corps recommends the Final PEIR/EIS incorporate additional existing data to more accurately and thoroughly depict water resources. Furthermore, the Corps recommends the Final PEIR/EIS clearly explain the assumptions and/or more accurately capture the projected direct impacts to biological resources by re-calculating the acreages of impact using a 50- to 100-foot-wide footprint of disturbance, which would more closely correspond to the actual construction and grading limits.

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Adverse indirect effects on aquatic resources also are expected to result from the implementation of the alternatives, although they are not entirely disclosed or understood based upon the discussion presented in Section 3.15 of the Draft PEIR/EIS. The loss or degradation of waters of the U.S. must meaningfully be considered in the context of the NEPA and the Guidelines. Based on our regulations and policies, the Corps places high degrees of importance on the functional losses either directly or indirectly caused by the discharge of dredged or fill material into waters of the U.S., including wetlands. Therefore, to the extent practicable for this programmatic document, the Final PEIR/EIS should quantitatively and/or qualitatively address the anticipated indirect effects to aquatic ecosystems in terms of sedimentation (e.g., sediment transport, aggradation, degradation), erosion, hydrologic regime, water quality, floodplain encroachment, and habitat integrity.

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cont.**Mitigation/Sequencing**

The NEPA requires a discussion of mitigation for adverse environmental impacts of alternatives, where mitigation is defined to include avoidance, minimization, restoration and creation of habitats. Section 404 of the CWA also requires consideration of practicable alternatives to avoid and minimize adverse environmental impacts, and further requires that these measures be exhausted before turning to restoration and creation of habitats.

The proposed tunneling of the high-speed train alignments in several segments of the northern mountain crossings and the Tehachapi Mountains in southern California would likely avoid or reduce the direct impacts to surface water resources, which is important in terms of demonstrating that the Project has taken appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem (40 C.F.R. 230.10(d)). We support the implementation of tunneling and any other design features that would further avoid or minimize impacts to the aquatic environment so long as such engineering techniques are proven to be otherwise environmentally compatible.

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The Corps strongly encourages the FRA and HSRA to make the most of the timely mitigation planning opportunities afforded at this stage of the environmental process by leveraging the resources of local, State, Federal, and non-profit entities to help with watershed-wide identification of areas suitable for wetlands enhancement, restoration and/or in-perpetuity preservation. In this vein, the Final PEIR/EIS should propose a more meaningful suite of mitigation strategies that would avoid and minimize impacts and/or compensate for any unavoidable adverse impacts to aquatic resources.

Data Needs

Albeit a landscape-level analysis, disclosure of the degree and magnitude of impacts is necessary for soliciting meaningful public input as well as for making informed decisions. As a matter of efficacy, Section 3.15 of the Draft PEIR/EIS should include a summary of the major

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impacts to water resources with accompanying aerial or topographic maps of sufficient scale that geo-spatially illustrate the potential direct and indirect effects associated with the discharge of dredged or fill material into waters of the U.S. We found Figures 3.15-2, 3.15-4A, 3.15-4B, 3.15-6, 3.15-8 and 3.15-10 to be deficient for such purposes.

Although not all-inclusive, the following list comprises a general overview of the potential data needs and analyses for identifying and assessing waters of the U.S. during the project-level, or Tier 2, environmental evaluation.

- A delineation of all wetlands, which could be affected by the proposed Project. The delineation must follow the procedures set forth in the 1987 Wetlands Delineation Manual and include the data support forms.
- A delineation of other waters of the U.S. as follows:
 - For tidal waters, the high tide line shall be determined as described at 33 C.F.R. § 328.3(d);
 - For non-tidal waters, the ordinary high water mark shall be determined as described at 33 C.F.R. § 328.3(e).
- All plant and animal taxa encountered during site visits;
- A detailed assessment of the functions and values of wetlands and other waters of the U.S. Functions are the physical, chemical and biological attributes of a wetland/waters without regard to their importance to society. Examples of functions include flood storage, wildlife habitat, and grounder water recharge. Values are those wetlands/waters functions that generally are regarded as beneficial to society, such as recreation, aesthetics, and wildlife viewing. The functional assessment should determine which functions are performed by the wetlands/waters, the value of those functions, and how the project will affect the continued performance of the identified functions. The precise assessment methodology for characterizing the functions and values of aquatic resources should be determined in close consultation with the Corps.
- A detailed assessment of project impacts on special aquatic sites and other waters as follows:
 - A detailed description of the project impacts, including the type of impact (e.g., habitat removal, fragmentation, introduction of exotic species) and its magnitude. These effects must be evaluated in the appropriate local or regional context.
- A detailed purpose and need statement, coordinated with the appropriate agencies. It is noteworthy to mention the Corps is solely responsible for the final approval of the overall project purpose used to conduct the 404(b)(1) alternatives analysis.
- A feasibility study of candidate mitigation sites
- Maps showing the occurrences of all associated sensitive species that have been identified within the survey area in relation to project features, including federally listed endangered and threatened species and designated critical habitat.
 - The size of the population(s) in terms of numbers of individuals and habitat occupied

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- The portion of the population(s) to be directly affected by each project alternative
- The portion of the population to be indirectly affected by each alternative
- The amount of suitable habitat to be directly or indirectly affected under each alternative

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cont.

Response to Comments of Aaron O. Allen, Acting Chief Regulatory Branch – U.S. Army Corps of Engineers, August 31, 2004 (Letter AF007)**AF007-1**

The FRA acknowledges the MOU between the FRA and cooperating federal agencies for this program environmental process and the general framework for the integration of NEPA and Clean Water Act Section 404 issues.

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The FRA acknowledges the regulatory context and expectations for future steps to satisfy Clean Water Act Section 404 permitting requirements.

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3a. Regarding the Northern Mountain Crossing, please see Standard Response 6.3.1. The Program EIR/EIS is based on available data bases and information, and now further study is planned in a separate program EIR/EIS considering a broad corridor including Pacheco Pass generally in the south and Altamont pass generally in the north before identifying a preferred alignment for the proposed HST system to connect the Central Valley to the Bay Area. The FRA consulted with Council on Environmental Quality (CEQ) on this approach and CEQ found that it appears to be consistent with NEPA and CEQ regulations (letter from Horst Greczmiel dated January 24, 2005). The referenced designation of "aquatic resources of national importance" (which is not a statutory designation) occurred in conjunction with the approval of the first phase of the extensive Diablo Grande residential and commercial development, was based on a broad literature review, and was not based on field review of resources in the area, parts of which have been in long term ranching and grazing use.

3b. Comment: "relevant quantitative information should be coalesced in the main report of the Final PEIR/EIS rather than relegated to appendices."

To represent the potential for direct impact to water and biological resources for the System Alternatives (Modal and HST), additional GIS analysis has been completed for the approximate footprint of the alternative facilities. The quantifications are representative of the unmitigated potential for direct impacts that could occur within the corridor. The analysis is included in Section 3.15 of the Final Program EIR/EIS with the appropriate summary information included in Chapter 6: HST Alignment Options Comparison and the Summary.

3c. Comment: "Additionally, supplemental data should augment the evaluation, particularly in areas of known sensitivity for which little site-specific data has been collected." "incorporate additional data to more accurately and thoroughly depict water resources."

The Authority and FRA are confident that all available and relevant information, commensurate with the level of decisions being made, has been considered in the preparation of the Final Program EIR/EIS. (See the following description of information sources applied to the analysis.) In addition, the Authority pursued further research regarding additional sources of information on wetland and water resources as a response to this and other similar comments. The research included over 12 agency and organizational data sources. Most of the data sources were based on or included the same information as the NWI and USGS databases. One exception was the California Spatial Information Library's Hydrographic database, which included a more comprehensive coverage of water resources than our previous sources. However, the additional information was still only a marginal increment over the USGS database previously applied.

In terms of information on wetlands resources, the co-lead agencies acknowledge the areas of the NWI where wetland resources have yet to be mapped; however, extensive attempts to obtain information in these areas has resulted in very little additional data.

In these areas of limited or no wetlands information, the co-lead agencies have determined that water resources are the best indicator of the presence of wetlands for this program level analysis. Comprehensive and complete information exists for the water resources and is readily compared in the Program EIR/EIS for each alignment option to determine those that have the least potential for impacting water resources. Subsequent project level studies will provide field surveys in all areas of potential impact along the alignment options carried forward.

The Final Program EIR/EIS reflects modifications to clearly identify where wetlands information is limited and where greater emphasis should be placed on the evaluation of water resources as an indicator of the presences of wetland areas.

General Statewide Screening Evaluation Approach and Information sources used:

Wetlands were primarily identified with data from the National Wetlands Inventory (NWI), depending upon NWI data availability. NWI coverage varied to some degree over the entire high-speed train study area. To address these variations, the NWI information was supplemented with location information recorded in the California Natural Diversity Database (CNDDB) for specific habitats and species that are related to wetlands. Other wetland location information from available site-specific studies was also utilized as described for each region of the study area below.

Using location information about wetlands from other studies and the databases noted above, the screening evaluation identified wetlands likely to be encountered by HST alignment segments, quantified the number of wetland crossings and in some instances acres of wetlands, and recorded the potential value of the wetlands. The assessment of potential wetland value considered if the wetland was a part of a larger system of wetlands, if the wetland was a part of a wildlife refuge or sanctuary, and if there were institutional restrictions on constructing in the wetlands. Special cases where wetlands are suspected which could affect the location of alignments or stations were noted and discussed qualitatively. Further analysis

of potential wetland impacts using available data and studies is described for alignment and station options considered in the Program EIR/EIS. At the subsequent project level, after completion of the Program EIR/EIS, wetland delineations would be completed along with detailed evaluation of reasonable and practicable avoidance alternatives.

Bay Area to Merced

Data from the NWI was used as the primary source of wetland location information. Using this data as a guide, the regional team (at an appropriate time of year) performed a drive-by visual inspection survey of wetland resources occurring along the proposed alignments to verify wetland resources identified as potentially affected. All alignment and station options were surveyed in this way and any additional potential wetland resources were recorded and considered in the screening analysis.

The USGS California GAP Analysis Program Data dated June 30, 1998 was used to fill in gaps in the National Wetland Inventory (NWI) database for this region. Specifically, the GAP data was used to fill in gaps in the vicinity of the proposed HSR corridor for the following quads where NWI data was unavailable:

- Saint Teresa Hills
- Morgan Hills
- Mount Madonna
- Pacheco Peak

The minimum mapping unit for the GAP data is 100 ha for upland community types and 40 ha for wetland communities. To account for mosaics of communities below this resolution, each map unit was attributed with up to three community types, each of which had to be >10% of the map unit area. The spatial locations of individual stands of vegetation therefore are not provided.

Thus, the GAP data may not have included small-scale wetlands along the HSR corridor where NWI data is missing, however, the GAP coverage is deemed suitable for the programmatic EIR/EIS.

Sacramento to Bakersfield

Data from the NWI was used as the primary source of wetland location information, and were supplemented with additional data from Natural Heritage Division, California Department of Fish and Game (California Central Valley Wetlands and Riparian GIS, July, 2, 1997), CA GAP Analysis (University of California, Biological Resources Division, January 29, 1996), USGS (hydrographic features and 7.5 minute topographic quadrangle maps, and FEMA flood plain mapping.

Data sources for vernal pools were available in this region and used for the analysis including information on vernal pool complexes greater than 40 acres in size for 29 Counties throughout the Central Valley (California Department of Fish and Game, Statewide Vernal Pool Density Classification, June 7, 2001), specific information regarding vernal pools in Merced (EIP Associates, Merced County NCCP Wetlands Delineation, August 28, 2002), and a separate data base of vernal pool densities throughout the Central Valley Merced (California Dept. of Forestry and Fire Protection, Fire and Resource Assessment Program (FRAP), Vegetation Data, October 2002).

Bakersfield-to-Los Angeles

The National Wetlands Inventory was the primary data source used in the regional wetlands analyses. It was acknowledged that the NWI had some gaps in information. Efforts were made to obtain additional data sources; however, additional information was available for very limited locations and was not consistent in type or extent. The next best data source to research for streambeds and wetlands are the USGS quadrangle maps for those gap areas. Using the USGS quadrangle maps is a reasonable source to determine the likelihood of streambed and wetland areas and provides relative information for each alternative considered. The USGS maps are often consulted in the initial stages of environmental assessment research to identify the likely location of such resources as wetlands

and streambeds. The location of the blue-line streams were further researched and confirmed by the interpretation of current aerial photography. This level of effort is reasonable and consistent for the gap areas for each alternative given the programmatic level of the document.

A program-level environmental document should provide sufficient relative detail for each alternative for comparison purposes in determining the potential environmental consequences of each considered. A program-level document is not used to permit a project and is not a project EIR or construction-level EIR. Detailed protocol survey or delineations are not appropriate at this level of analysis, particularly considering the specificity and certainty of the engineering and project description information available. It is anticipated that the program-level document provides decision makers with a comparative evaluation with the understanding that a subsequent document will address the proposed project to a level of detail consistent with the protocol needed to obtain relevant permits from state and federal agencies. The methods used for the California High Speed Rail Project were defined with this in mind.

Los Angeles-to-San Diego via- Inland Empire Corridor

Using the NWI GIS database as a guide, a two-day drive-by visual inspection survey (at an appropriate time of year) of the wetland resources occurring along the proposed alignments to verify wetland resources identified as potentially affected. Relevant wetlands were photographed. Because vernal pools are not indicated on the NWI database, prior to initiating the field survey, the team reviewed relevant maps noted below to obtain information about potential vernal pools occurring in the project area, particularly in western Riverside County and in MCAS Miramar.

The following are supplementary sources of information that were used in the screening evaluation:

- Previous project evaluations including Parsons-Brinckerhoff (1996, 1999, 2000)
- The California Natural Diversity Database (CNDDB)

- The California Department of Fish and Game (CDFG) Map of Vernal Pool locations in Western Riverside County 16
- MCAS Miramar's Integrated Natural Resources Management Plan
- The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) 17
- Review of general plans for several cities
- Review of aerial photography

The evaluation focused on identifying natural wetlands resources (unchannelized wetlands) within or directly adjacent to the areas of potential rights-of-way for alignments and station areas under consideration. These natural wetlands include riparian wetlands (associated with rivers, streams, creeks, etc.), vernal pools, and freshwater marsh habitats.

Los Angeles-to-San Diego via- Orange County

Data from the NWI and CNDDB were used as primary sources of wetland location information, and were supplemented with the following data sources:

Browne and Vogt. 1982. Buena Vista Lagoon Watershed Enhancement Program, Draft Report on the Engineering Analysis of the Buena Vista Lagoon Watershed. Technical Report submitted to City of Carlsbad (Carlsbad, CA) and State Coastal Conservancy (Oakland, CA).

Buena Vista Lagoon Foundation. 1983. Buena Vista Lagoon Stewardship Plan.

Buena Vista Lagoon JPC. 1996. Buena Vista Lagoon Joint Powers Committee – Strategic Plan.

California Department of Fish and Game. 1991. Interim Management Plan: Buena Vista Lagoon Ecological Reserve.

California Department of Fish and Game. 2002. California Natural Diversity Database Rare Find 2. October 2002.

California Native Plant Society. 2000. California Native Plant Society's Inventory of Rare and Endangered Plants of California. Special Publication #1 Sixth Edition.

City of Carlsbad and Port of Los Angeles. 1989. Sediment Load Study for Batiquitos Lagoon – Draft Technical Memorandum for the Batiquitos Lagoon Enhancement Project.

Coppock, D. et al. 1985. Los Peñasquitos Lagoon Enhancement Plan and Program. Prepared for the Los Peñasquitos Lagoon Foundation and State Coastal Conservancy.

County of Orange. 1996. Natural Community Conservation Plan and Habitat Conservation Plan. Final Administrative Record. July 17, 1996.

County of San Diego Department of Parks and Recreation. 1995. San Elijo Lagoon Area Enhancement Plan Draft. August 1995.

Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

Enriquez, Jake. County of San Diego Department of Parks and Recreation. 2003. Personal Communication. January 3, 2003.

Hastings, Mike. 2000. A Summary Analysis of Existing Conditions Affecting Los Peñasquitos Lagoon and Watershed. September 8, 2000.

Hastings, Mike. Los Peñasquitos Lagoon Foundation. 2003. Personal Communication. January 15, 2003.

Merckel, & Associates, Inc. 1999. Batiquitos Lagoon Enhancement Project Long Term Monitoring and Pilot Revegetation Program. 1999 Annual Report Executive Summary.

San Dieguito River Park Joint Powers Authority. 2000. Environmental Impact Report/Environmental Impact Statement for the San Dieguito Wetland Restoration Project. September 2000.

Soczka, Ernie. NRG Cabrillo Power. 2002. Personal communication. November 1, 2002.

Soczka, Ernie. NRG Cabrillo Power. 2003. Personal communication. January 6, 2003.

State Coastal Conservancy and the City of Del Mar. 1979. San Dieguito Lagoon Resource Enhancement Program.

Wootten, Ron. 2002. Buena Vista Lagoon Restoration Feasibility Analysis – Request for Proposals. Prepared for the Buena Vista Lagoon Foundation. April 8, 2002.

www.ceres.ca.gov/wetlands/geo_info/so_cal/agua_hedionda. 2002. Obtained information on Agua Hedionda Lagoon. October 29, 2002

www.epa.gov/owow/wetlands/restore/5star/fy02grants. 2002. Obtained information on lagoon restoration activities. October 29, 2002.

www.nwi.fws.gov. 2003. National Wetlands Inventory. U.S. Fish and Wildlife Service.

www.torreypine.org/tplagn. 2002. Los Peñasquitos Marsh Natural Preserve and Lagoon. Written by Carl L. Hubbs, Thomas W. Whitaker, and Freda M. H. Reid. Torrey Pines Association. Website visited October 28, 2002.

3d. To represent the potential for direct impact to water and biological resources for the System Alternatives (Modal and HST), additional GIS analysis has been completed for the approximate footprint of the alternatives to clarify the information concerning potential impacts. For the HST Alternative this analysis identified and quantified potential direct impacts based on the representative Draft Program EIR/EIS alignments within the broader GIS envelopes used to identify the potentially affected resources. For the Modal Alternative this analysis identified and quantified potential direct impacts for the highway improvements only. Airport improvements represented a relatively minor portion of the additional right of way required and were not included for this additional analysis. The quantifications are representative of the unmitigated potential for

direct impacts that could occur within the corridor. Subsequent project level engineering and environmental studies would focus on avoidance and minimization of potential impacts. The analysis is included in Section 3.14, Section 3.15, Chapter 6 and the Summary of the Final Program EIR/EIS.

3e. Comment: “to the extent practicable for this programmatic document, the Final PEIR/EIS should quantitatively and/or qualitatively address the anticipated indirect effects to aquatic ecosystems in terms of sedimentation (e.g., sediment transport, aggradation, degradation), erosion, hydrologic regime, water quality, floodplain encroachment, and habitat integrity.”

Section 3.17 of the Final Program EIR/EIS addresses the anticipated indirect effects to aquatic ecosystems in general qualitative terms as they relate to the construction and operation of the facilities proposed in the HST and Modal Alternatives. The description of design practices addresses features included in the proposed HST system to reduce and avoid potential adverse environmental impacts and how the proposed HST system design would be further refined and developed to minimize and avoid direct and indirect impacts to aquatic and biological resources has been added to Section 3.14.5, and Section 3.15.5 of the Final Program EIR/EIS.

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Each environmental area (sections of Chapter 3) has been modified to include more specific mitigation strategies that would be applied generally for the HST system. Each section of Chapter 3 also outlines specific design features that will be applied to the implementation of the HST system to avoid, minimize, and mitigate potential impacts.

AF007-5

Please see response AF007-3d. Inclusion of more detailed mapping in the Program EIR/EIS is not feasible because of the vast geographic scale of the alternatives at this point in the planning environmental process. Please see the Final Program EIR/EIS Section 3.14.3 and Section 3.15.3 regarding a discussion of the

representative levels of impacts to waters of the U.S. from the HST Alternative. Moreover, additional mitigation measures for minimization of impacts to waters of the U.S. have been added to Section 3.14.6 and 3.15.6.

The Co-lead agencies agree with the list of information and analyses that would be needed for the project-level or Tier 2 environmental evaluation.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

AF008

August 31, 2004

Mark Yachmetz
Associate Administrator of Railroad Development
Federal Railroad Administration
1120 Vermont Avenue, NW, MS 20
Washington, D.C. 20590

Subject: California High Speed Train System Draft Programmatic Environmental Impact
Report/Environmental Impact Statement (CEQ# 040056)

Dear Mr. Yachmetz:

The Environmental Protection Agency (EPA) has reviewed the Draft Programmatic Environmental Impact Report/Environmental Impact Statement (Draft PEIS) for the California High Speed Train System. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. EPA provided comments to the Federal Railroad Administration (FRA) and the California High Speed Rail Authority (CHSRA) regarding a portion of this Draft PEIS in a previous letter dated February 27, 2004. Our detailed comments on the entire Draft PEIS are enclosed.

EPA is supportive of a high speed train system for California and the potential for this project to reduce motor vehicle and airplane emissions. EPA requested to be a cooperating agency in this NEPA process and has been working with FRA and CHSRA to address the potential environmental impacts of the project as outlined in an April 2003 Interagency Memorandum of Understanding (MOU). According to the MOU, the Draft PEIS is a "Tier 1," or programmatic environmental review document, providing a landscape-level analysis of the potential environmental impacts. The Tier 1 process is expected to eliminate alternatives for further consideration. Future "Tier 2," or project-level analyses, will address site-specific environmental impacts of the remaining alternatives. EPA's comments focus on issues we would like addressed before a Tier 1 Record of Decision is signed and seek to alert FRA to the potential consequences of these decisions on future Tier 2 analyses.

The MOU also outlines a process for integrating the requirements of NEPA and Clean Water Act (CWA) Section 404 to streamline the environmental review process. A federal permit from the Army Corps of Engineers under CWA Section 404 will be required for this project at Tier 2 due to anticipated fill of waters of the United States. The MOU seeks to ensure that the alignments advanced to Tier 2 are most likely to contain the "least environmentally damaging practicable alternative," a determination that is required for a CWA Section 404 permit. FRA and CHSRA must also demonstrate avoidance and minimization of impacts to waters of the United

States prior to obtaining a CWA Section 404 permit. EPA and the Army Corps of Engineers have been working with FRA and CHSRA to provide guidance regarding the least environmentally damaging practicable alternatives and will continue to work with both agencies through the project-level analysis for the high speed train system.

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cont.

Through this coordination and review, EPA has identified a potential for significant adverse effects within some portions of the proposed high speed train system that could be corrected by project modification or other feasible alternatives, as well as additional information and analyses that should be included in the Final PEIS. EPA has identified potential impacts to aquatic resources of national importance (CWA Section 404(q), 33 U.S.C. 1344(q)), wetlands and water quality, wildlife habitat, and endangered species that would result from the alternative alignments presented for the Diablo Direct and Pacheco alignments within the Bay Area to Merced region. The proposal for a high speed train route following the Diablo Direct alignments presents federal permitting challenges because it would fragment the Diablo Range, bisect aquatic resources of national importance (including Orestimba Creek), and impact state parks, wilderness, and private, state, and federal conservation and mitigation lands. Based on the information available to date, EPA would have difficulty concurring on a Diablo Direct alignment as the least environmentally damaging practicable alternative. The Draft PEIS identifies that a proposed route through the Pacheco Pass may result in significant impacts to waters of the United States, resulting in similar permitting difficulties. Because of the potentially adverse impacts from the Diablo Direct and Pacheco alignments, we recommend deferring a decision on an alignment connecting the Bay Area to Merced until the information in this analysis can be supplemented to demonstrate to the public and the decision-maker that all variations of an Altamont Pass alternative have been fully evaluated in keeping with the CWA Section 404(b)(1) Guidelines. As a cooperating agency, we look forward to meeting with you to discuss whether this new information would best be presented in a supplemental document or in the Final Tier 1 PEIS. This will help to ensure that the alignment moved forward for future Tier 2 project-level study is most likely to contain the least environmentally damaging practicable alternative connecting the Bay Area to Merced region.

AF008-3

Significant impacts to biological resources are also expected from the high speed train system alignments connecting Bakersfield to Los Angeles (Interstate-5 and Soledad Canyon). The Soledad Canyon alignment requires more miles of track, with greater impacts to sensitive biological resources and wildlife movement corridors. If aligned next to the Santa Clara River, this alternative would require substantial cut-and-fill within the sensitive Soledad Canyon region. These significant environmental impacts can be avoided by more closely aligning the high speed train route with existing transportation networks.

AF008-4

The high speed train system in the Central Valley includes a series of community bypasses to be constructed in addition to alignments proposed through communities. The extra tracks and system requirements related to the additional bypasses more than doubles the number of acres of converted farmland, increases severance of farm parcels, adds noise and visual impacts from additional tracks, and increases impacts to water and biological resources. Because

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of the potentially significant impacts that would result from the extra tracks required from community bypasses, we recommend that Final PEIS commit to future Tier 2 project-level analysis comparing the high speed train system with and without bypasses.

In addition to the potential significant adverse effects identified above, EPA has identified additional information and analyses that should be included in the Final PEIS. The quantities in the Draft PEIS pertaining to impacts to biological and water resources represent an "envelope" approach to estimating impacts. The large values presented do not facilitate an understanding of the potential direct impacts from a high speed train system. As discussed in interagency meetings, this warrants additional information more closely approximating potential direct impacts to biological and water resources. EPA also has concerns regarding the cumulative impacts analysis, potential landscape-level impacts to wildlife species associated with the fully grade-separated portions of the high speed train system, and potential impacts associated with tunneling.

Although EPA is supportive of a high speed train system for California, our rating reflects our specific objections to impacts that would result from the two Bay Area to Merced alignments, an alignment through Soledad Canyon connecting Bakersfield to Los Angeles, and bypasses proposed to supplement routes through communities in the Central Valley. For these reasons, EPA has rated the document as EO-2, Environmental Objections - Insufficient Information. We look forward to working with FRA and CHSRA, as a cooperating agency, to identify ways to address these issues and the other concerns identified in the enclosed detailed comments.

The enclosure further describes the above-listed comments and the additional environmental concerns that EPA identified following our review of the Draft PEIS. A "Summary of Rating Definitions" for further details on EPA's rating system is also provided. We appreciate the opportunity to review the Draft PEIS and believe that a well planned high speed train system can offer great economic and environmental benefits for California's future. We look forward to continuing our coordination with FRA and CHSRA as a cooperating agency and are available to discuss the issues addressed in this letter during upcoming interagency meetings. If you have any questions, please feel free to call me at (415) 972-3843. You can also contact Tim Vendilinski, Wetlands Regulatory Office Supervisor at (415) 972-3464 or Lisa Hanf, Federal Activities Office Manager, at (415) 972-3854.

Sincerely


Enrique Manzanilla, Director
Cross Media Division

Enclosures: EPA's Detailed Comments
Summary of Rating Definitions

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cont.

cc:

Mehdi Morshed, California High Speed Rail Authority
Colonel Alex Dornstauder, Los Angeles Army Corps of Engineers
Wayne White, U.S. Fish and Wildlife Service
Crawford Tuttle, California Resources Agency
James Branham, California Environmental Protection Agency

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EPA DETAILED COMMENTS ON THE CALIFORNIA HIGH SPEED TRAIN SYSTEM DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT, AUGUST 31, 2004

Clean Water Act Section 404

The Clean Water Act Section 404(b)(1) Guidelines (Guidelines) at 40 CFR Part 230.10(a) state that "... no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." A practicable alternative is one "available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes." Alternatives from the NEPA documents (including this Tier 1 Draft PEIS) can serve as the basis for the Section 404 alternatives analysis (40 CFR 230.10(a)). As described in the Interagency Memorandum of Understanding (MOU), EPA and the Army Corps of Engineers are committed to working with the Federal Railroad Administration (FRA) and the California High Speed Rail Authority (CHSRA) to cooperate at the Tier 1 programmatic level to streamline decision-making at the Section 404 permitting phase. As such, it is critical that high speed train alternative alignments moved forward to the Tier 2 stage are most likely to contain the least environmentally damaging practicable alternative and that no alternatives are eliminated without this determination. In addition, prior to obtaining a CWA Section 404 permit, FRA and CHSRA will have to demonstrate that potential impacts to waters of the United States have been avoided and minimized to the maximum extent practicable (40 CFR 230.10(a) and 230.10(d)).

Northern Mountain Crossings

Diablo Direct Alignments

EPA has objections to the Diablo Direct alignments because they may cause significant adverse effects to the health of the aquatic ecosystem in the Diablo Mountain Range, including the Henry Coe State Park and Orestimba Wilderness. The Diablo Direct alignments would bisect the Diablo Range, resulting in substantial habitat fragmentation, disruption of important wildlife corridors, and impacts to State and Federal mitigation lands established pursuant to permitting and enforcement agreements with the Diablo Grande Resort. EPA recognizes that tunneling is proposed to mitigate habitat fragmentation in this area; however, it is unclear how effective tunneling would be in minimizing fragmentation. During the permitting process for the Diablo Grande Resort, EPA designated the federally regulated waters in Del Puerto Creek, Salado Creek, Crow Creek, and Orestimba Creek watersheds of the Diablo Range, as *aquatic resources of national importance* under our Memorandum of Agreement (MOA) with the Department of the Army, pursuant to CWA Section 404(g) (33 U.S.C. 1344(g)). (This information has been provided to FRA and CHSRA during our interagency meetings.) These creeks and their surrounding watersheds are characterized by high food-web productivity and physical habitat for fish and wildlife, and also support adjacent wetlands and riffle and pool complexes. Orestimba Creek, in particular, has one of the few remaining Sycamore Alluvial Woodlands in California. As a result, projects requiring a CWA Section 404 permit that would result in unacceptable adverse effects to federally regulated waters within these watersheds of the Diablo Range could be candidates for elevation using procedures detailed in the MOA.

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AF008-9

The Diablo Direct alignments bisect the Diablo Range, encompassing approximately two million acres of relatively intact watersheds in a state where the majority of waterways have been degraded. The streams, wetlands, springs, and surrounding watersheds of the Diablo Range provide intact habitat that protects and supports a collection of plants and animals considered to be part of a biodiversity hotspot of global significance (Myers 2000). Non-governmental organizations and government organizations at all levels have been investing in large-scale acquisitions totaling approximately 300,000 acres for conservation and consider this area to be the last significant unprotected open space between the San Francisco Bay Area and the Central Valley (The Nature Conservancy 2003). Decreasing the aquatic functions directly through discharges to waters in the Diablo Range, or indirectly through degrading upland resources, are impacts that EPA will consider carefully in determining whether any of the Diablo Direct alignments comply with the CWA Section 404(b)(1) Guidelines.

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The impacts of the Diablo Direct alignments may be considered significant adverse environmental impacts under the Guidelines. Considering the high value aquatic resources and large-scale habitat fragmentation, the Diablo Direct alignments do not appear to exhibit characteristics of the "least environmentally damaging practicable alternative," the only alternative that can be permitted under the binding CWA Section 404 regulations (40 CFR 230.10 (a) and (c)). Therefore, EPA anticipates that there may be significant permitting challenges to these alignments.

Pacheco Pass Alignments

As disclosed in the Draft PEIS, the Pacheco Pass alignments may result in substantial impacts to wetlands and other waters and may result in great impacts to jurisdictional waters. EPA has environmental objections to these impacts. The Draft PEIS identifies a potential for over 1,000 acres of impact to wetlands within a 2,000-foot corridor (App. 3.15-D-2). We recognize this overestimates the potential direct impacts that will occur within the 100- or 50-foot high speed train project footprint. A screening tool prepared to determine which alignments would be studied in the Draft PEIS identifies that the Pacheco Pass alignments may impact between 289 and 394 acres of wetlands (Table 2-H-4e, p. 6). The loss of wetlands associated with Pacheco Pass alignments, as well as the impacts to wildlife corridors and habitat fragmentation, are not consistent with the substantive binding requirements of CWA Section 404(b)(1) Guidelines (40 CFR 230.10 (a) and (c)). Specifically, the magnitude of impacts to special aquatic sites may cause or contribute to significant degradation of waters of the United States (40 CFR 230.10(c)). If the FRA chooses to advance the Pacheco Pass alignments to Tier 2, substantial alignment and design modifications would be important to reduce impacts consistent with the Guidelines.

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Recommendations:

Based on the information available to date, EPA would have difficulty concurring on a Diablo Direct alignment as the least environmentally damaging practicable alternative.

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Also, in light of the potentially significant impacts to waters resulting from the Pacheco Pass alignment, additional measures to avoid and minimize impacts to waters should be evaluated.

Altamont Pass Alignment

Because the Diablo Direct and Pacheco Pass alignments, as proposed, may have significant adverse impacts to waters of the United States and could be inconsistent with the Guidelines, it is important to fully evaluate other viable alternatives in Tier 1. The Altamont Pass Alternative in the Bay Area to Merced region was not fully evaluated in the Draft PEIS. Page 2-38 states that Altamont Pass would result in considerable system operational constraints, would not permit high-frequency service to the major Bay Area markets, and would require a new San Francisco Bay Crossing. A new crossing of the San Francisco Bay, as well as a route through the Don Edwards National Wildlife Refuge, could result in impacts to important aquatic resources and habitat for multiple species. While EPA understands that an Altamont Pass alignment with a Bay Crossing may have significant environmental impacts, an analysis of an Altamont Pass alignment with and without a Bay crossing should be completed to determine which Bay Area to Merced alignment is most likely to contain the least environmentally damaging practicable alternative. Through interagency meetings, EPA has stated that information presented in the Draft PEIS supporting the elimination of Altamont Pass is not sufficient in light of: (1) the significant impacts associated with the only other alternatives for connecting the Bay Area to Merced, and (2) the potential for practicable design variations of the Altamont Pass alternative to meet the stated purpose and need for the project.

Recommendations:

FRA and CHSRA should establish why Altamont Pass should be eliminated and provide supporting documentation regarding relevant technical studies, market share estimates, ridership (intercity and commute trips) analysis data, and operational constraints. The analysis should clearly demonstrate and support why all variations of an Altamont Pass alternative (including an alignment without a Bay Crossing and with destinations to San Jose and San Francisco with service to Oakland on existing light-rail) are not practicable in light of the entire high speed train system and logistical constraints that must be addressed in other urban centers.

Alternatively, FRA and CHSRA should analyze a full range of reasonable alternatives, including an Altamont Pass alignment with and without a Bay Crossing, so that an equal comparison between all the Bay Area to Merced alternatives can be made. The analysis should include Tier 1 landscape-level data, such as a complete list of water bodies, wetlands, and streams that are mapped on USGS 7.5 minute maps (even if these water ways are not digitized or available electronically), as well as broad "edge-area" analysis to quantify fragmentation.

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AF008-11

Southern Mountain Crossings**Interstate-5 and State Route 58/Soledad Canyon**

The Draft PEIS identifies that data gaps exist for both the Interstate-5 (I-5) and the State Route 58 (SR-58)/Soledad Canyon route. The high speed train alternative will traverse "more undeveloped (and possibly more unsurveyed) area" than the modal alternative and that the high speed train alternative may impact a larger number of special-status species and habitat than has been estimated in the document (p. 3.15-24)." The I-5 route would provide a more direct connection between Northern and Southern California and would require fewer miles of track (87 versus 120 miles) and less overall conversion of land from open space to transportation uses than the SR-58/Soledad Canyon alignment. It would also impact fewer biological resources (p. 3.15-25). The SR-58/Soledad Canyon route would be even more damaging if it parallels the Santa Clara River and utilizes cut-and-fill techniques in this sensitive region. The Santa Clara River and Soledad Canyon provide wildlife corridors and contain sensitive plant communities and essential habitat for an endangered native fish, the unarmored threespine stickleback, as indicated in the Draft PEIS (BLM, 2000). EPA would not support an alignment that causes significant adverse impact to this major regional resource for wildlife. The Draft PEIS indicates that a wider corridor, including a route that would avoid Soledad Canyon and the Santa Clara River, is also being considered; however, there is no information presented regarding the environmental impacts associated with a route that avoids these areas.

AF008-12

Recommendations:

Clarify the extent of underestimated impacts for the Interstate-5 (I-5) and State Route 58(SR-58)/Soledad Canyon routes. As mentioned above, Tier 1 landscape-level analysis should include a complete list of water bodies, wetlands, and streams that are mapped on USGS 7.5 minute maps (even if these water ways are not digitized or available electronically), as well as broad "edge-area" analysis to quantify fragmentation. If substantial data gaps cannot be addressed in the Final PEIS, defer elimination of either Bakersfield to Los Angeles alignments until sufficient information is available in order for Army Corps of Engineers and EPA to conclude that the alignment being moved forward to the Tier 2 analysis is most likely to contain the least environmentally damaging practicable alternative.

The Final PEIS should disclose the impacts from an alignment from Bakersfield to Los Angeles through the Antelope Valley that would not follow Soledad Canyon and the Santa Clara River and would not degrade existing and proposed conservation areas. The Final PEIS should include a mapped alignment of such a route and correlate the modified route with impacts that would be avoided by moving the alignment out of the canyon.

Express Loops and Bypasses in the Central Valley

The Draft PEIS proposed several potential express loops/bypasses to circumvent the more congested urban areas, reduce costs, and reduce potential urban impacts such as noise. The Draft

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